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PRE-COLLEGE ORIENTATION OF BLIND HIGH SCHOOL GRADUATES. FINAL REPORT.

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FORTY-SEVEN LEGALLY BLIND HIGH SCHOOL GRADUATES BETWEEN 16 AND 20 YEARS OF AGE, ACCEPTED BY A COLLEGE OR UNIVERSITY, PARTICIPATED FOR 6-WEEK PERIODS IN A 3-YEAR PROJECT TO DEMONSTRATE THE VALUE OF CONFRONTING THE STUDENTS WITH AND ASSISTING THEM IN RESOLVING A REALISTIC AND BROAD GAMUT OF PERSONAL, ACADEMIC, SOCIAL, AND PSYCHOLOGICAL PROBLEMS WHICH OCCUR IN COLLEGES. THE PROGRAM PROVIDED CONTACT WITH (1) DORMITORY LIVING, (2) REGISTRATION, (3) EXTRACURRICULAR ACTIVITIES AND COUNSELING SERVICES, (4) LIBRARY, LABORATORIES, CAFETERIA, AND OTHER COMMON CAMPUS FACILITIES, AND (5) REMEDIAL SERVICES SUCH AS MOBILITY TRAINING, GROOMING, AND SOCIAL MODIFICATIONS. FINDINGS INCLUDE -- (1) THE BLIND STUDENTS EVIDENCED ESSENTIALLY THE SAME PATTERN OF INTERESTS AS THEIR SIGHTED PEERS BUT RATED HIGHER ON MATURITY SCALES, (2) THEIR LACK OF PROFICIENCY IN TYPING WAS A SERIOUS PROBLEM, (3) THEY WERE EXCEPTIONALLY WEAK SPELLERS AND REQUIRED CONSIDERABLY MORE STUDY TIME THAN THE SIGHTED, (4) OVER 91 PERCENT WERE SUCCESSFUL IN REMAINING IN COLLEGE, (5) GROUP SESSIONS IN MOBILITY TRAINING AND PHYSICAL FITNESS WERE BENEFICIAL, AND (6) INTERESTED, MATURE UNDERGRADUATES WERE CAPABLE OF WORKING WITH THE BLIND STUDENTS. SIMILAR PROGRAMS FOR STUDENTS WITH OTHER DISABILITIES WERE RECOMMENDED. (JK)

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FINAL SUMMARY REPORT

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PRE-COLLEGE ORIENTATION OF BLIND HIGH SCHOOL GRADUATES

Introduction

The Department of Rehabilitation Medicine of the State University of New York Upstate Medical Center, in conjunction with the Vocational Rehabilitation Service of New York State Department of Social Welfare and Syracuse University, has completed a three-year demonstration Pre-College Orientation Program for Blind High School Graduates who had been accepted as students in a number of colleges.

The purpose of the project was to demonstrate that the provision of a period of pre-college orientation to a collegiate situation would be of significant value to visually handicapped students by confronting the students with a realistic and broad gamut of personal, academic, social, and psychological problems which occur in college and by assisting the students in the resolution of such problems.

The impact of increased technological knowledge, mechanization, and world events have led to numerous changes in the labor market and the economy of the country. Educators and business leaders have recognized the advantages of college education in order that each individual may seek employment at the highest possible level. The Vocational Rehabilitation Service of New York State Department of Social Welfare has endeavored to make higher education available to blind clients with the anticipation that maximum vocational potential will be realized with such training. College education for blind individuals is a costly process and can be anticipated to become increasingly expensive. Initial experiences with college education of the blind young people have suggested that orientation programs might enable them to derive more benefit from their college exposure and increase the number succeeding in college.

For many such students, the transition from high school to college represents more than a simple transfer from one educational institution to another. In this process the student is required to make an adjustment to a whole new set of norms and experiences within a relatively short time. He must establish himself as an independent unit within a usually large and complex collegiate community, and he must simultaneously meet the new social and academic demands placed upon him. Too often these pressures, coupled with insecurity, cause dropouts from school. A number of studies have demonstrated that a significant number of college students drop out of college for other than academic reasons, but it has been difficult to relate findings from one investigation to another (e.g. Ivey, 1963; Smith, Perkins, & Zugler, 1957; Wall, 1962; Zwicky, 1965) due to difference in evaluation techniques, organization, and purposes underlying various pre-college programs. However, Halliday has suggested that pre-admission counseling and orientation is required to overcome the non-intellectual factors which are related to this problem. Michigan State University has successfully employed a pre-college orientation program to facilitate this transition, and it is now considered an integral part of the freshmen program. It is generally accepted that blind students will experience greater trauma during this transition than their sighted

peers. The anxiety generated by the need to rapidly adjust to a totally new environment is often overwhelming. This demonstration program attempted to familiarize the blind student with this new environment, utilizing a typical "environment" with all of its attendant expected and unexpected problems. While providing an intense exposure, the project afforded to the blind student a climate of guidance and support ordinarily absent on a college campus.

Methodology

Forty-seven legally blind high school graduates were selected by the project director from a larger number referred by the Vocational Rehabilitation Service. Students were selected on the basis of severity of blindness and associated problems determined by careful review of referral data. Each group was, by pre-arrangement, limited to 16 individuals. There were 29 males and 18 females ranging from 16-20 years of age, all of whom met the criteria of blindness and acceptance by a college or university.

The Pre-College Orientation Program was conducted by the Rehabilitation Center on the campus of Syracuse University, also utilizing a number of services of State University Hospital. The visual acuity of the forty-seven students was: total blindness - 18; 10/200 corrected, bilateral - 17; 20/200 corrected, bilateral - 7; other - 5. Fifteen students had been living in residential schools for the blind, while 32 had been educated in a competitive setting with non-handicapped children. Twenty-one students came from rural areas, the remaining 26 from urban settings. The six-week program of instruction was purposefully flexible to provide individual as well as group evaluation and counseling. Since the project concerned itself primarily with the establishment of a realistic array of challenges and problems for the blind students, the project staff intensely studied referral material forwarded by VRS counselors which included the background, achievements, peculiarities, problems, and other personal characteristics of the blind students. Although preference was given to those students who were totally blind, review of the data forwarded by VRS counselors sometimes suggested that there were students with some vision who might benefit more in view of their histories of underachievement and lesser degree of disability acceptance. They differed in their ability to travel independently, in their social graces, in their interpersonal behavior, in their academic background, and in their adaptability.

A staff of eight counselors was employed by the project each year. They were drawn from persons pursuing graduate and undergraduate education in the areas of medicine, social work, psychology, vocational rehabilitation counseling, and education. Interest in the problems of blindness and considerable maturity and ability to communicate were deciding factors in the selection of staff. The undergraduate students (5) were majoring in sociology, psychology, or pre-medical studies. Three have gone on to graduate study in allied health professions.

Also available to the project on a full-time basis was a peripatologist who frequently filled the function of a counselor and advisor to the students and staff. The physical and occupational therapy sections, as well as medical services of the Department of Rehabilitation Medicine of the Upstate Medical Center, were also available to the project.

Approximately six hours of orientation was provided to all the counselors each year. This orientation was devoted to discussion of objectives of the project, the emotional needs of blind students, a familiarization with the physical characteristics of the campus of Syracuse University and the community and general information about blindness and techniques for dealing with blind students.

Each of the counselors in the project was assigned a number of the blind students for whom he or she would be responsible. The assignments of the students to counselors was broadly based on the ratio of two or three students to each counselor. The assignment of students was intended to be flexible because at times a counselor might be concerned with as many as five or six of the students, while another counselor might be spending most of his time with a single student who was experiencing significant difficulty and who appeared to require considerable individual attention.

During the counselor orientation, it was stressed that they were not merely to "babysit" for the students. Thus, no attempt was made by the counselors constantly accompanying the students. Generally, this approach was well received by the students. Provision of a centrally located meeting place which was available solely for use of the students was of considerable importance to the project. It provided stability to the program and served as an anchor point in helping with mobility training. The counselors worked out a rotating system of duty hours and so provided that one was always at the meeting place and available to the students.

The general aims of the program included:

1) Introduction of each student to dormitory living in a large, complex college community and to the many problems of living on a typical college campus in an unfamiliar community.

2) Encouragement of each student to explore and participate in the procedures and routines of college life, including extra-curricular activities, counseling services, and study techniques.

3) Orientation to the common facilities found on every college campus; i.e., the library, laboratories, and cafeteria, and insure the most effective utilization of these facilities.

4) Testing and evaluation of each student to determine remedial services which might be required to achieve maximum success in college.

5) Provision of appropriate remedial services required by the group of students or individuals within the group, including mobility training, grooming, social and behavior alterations and modifications.

6) Provision to the Vocational Rehabilitation Service with data concerning the needs of their client-students which might assist the VRS counselor in his future ongoing relationships with the students.

7) Provision of data to the colleges enrolling the students, which might enable these institutions to work most effectively with their blind students.

8) Determination by regular follow-up for the three project years the major adjustments and changes experienced by the blind students.

9) Evaluation of inter-agency and inter-institutional cooperation and coordination of such a project.

Results and Discussion

The initial anxiety-producing situation of college entrance involves confrontation with non-handicapped students meeting staff and faculty and gaining acceptance in an academic atmosphere. In the program, the blind student was immediately introduced to this problem by assigning him to a room in a University dormitory to be shared with a non-handicapped college student attending the summer session. Initially, this assignment created concerns among the blind students and their parents who feared that the non-handicapped roommate would reject the blind student. Many of the visually handicapped had, in the past, sought the security of their similarly handicapped peers and had not been exposed to the necessity of adjustment to non-handicapped peers. Now, they were being forced to compete and to accommodate to sighted standards for the first time.

Living in such an environment for six weeks familiarized the blind students with life in a college dormitory and all the problems that appear in such a situation. It taught them to adjust their study habits to suit a variety of conditions. It required them to make behavioral adjustments relative to the groups and individuals they might wish to associate with, as well as giving them the pleasantly surprising realization that others will accept their handicaps rather easily if they themselves are at ease. It was felt that the program thus served not only the visually handicapped student, but also served as a model for public education. The sighted students on campus were exposed to blindness in new and unusual circumstances. They became aware that the person who is blind has potential, ability, and problems similar to their own and that he is capable of hard work, sharing responsibility, and enjoying recreation as he matures into a successful citizen in a sighted community. Further, other students saw the blind students as a group of individuals with varying skills and social attributes, rather than a conceptualized unusual individual who is the embodiment of all blind persons. Living-together was a rewarding experience for the blind students. One said, "The visually handicapped should be encouraged to seek sighted friends. After all, the visually handicapped are in the minority and must learn to live with the majority under all circumstances".

Prior to the registration, each student was provided with a list of available courses. They were advised that they were expected to take one course for credit, although the staff was prepared to allow individuals experiencing problems to audit their courses. Each student was impressed with the importance of consulting faculty advisors when selecting their programs.

On the first day of the Program, each student encountered the experience of student registration which is one of the most confusing, frustrating, and time-consuming procedures found on any campus. Counselors experienced in these registration procedures were assigned to the students and advised them in planning and preparing registration cards and on moving through the process with minimal difficulty. Those students who did not accept the assistance met with difficulty. In either case, the experience was a valuable one.

During each summer session of the project the counselor staff made at least one personal contact with the faculty members involved in the classes attended by the blind students. These contacts were established after the class had met for the first week's five sessions. The purpose of these contacts with the faculty was to offer to read examinations to the blind students where this might be necessary; to obtain faculty opinion regarding student participation in class and to obtain faculty permission for the counselors to periodically attend classes to observe student note-taking techniques. No effort was made to obtain special consideration for the students. Each student was informed that counselors would cooperate in any special arrangements made for examinations and assignments but that students must initiate all such assignments.

It was noted that in each instance the faculty involved in those courses attended by the blind students were helpful and considerate. The blind students experienced varying degrees of academic success ranging from course failure to a number of students who succeeded in achieving the highest grade for the course. A number of students were allowed to withdraw from their courses but continued to attend classes in an "auditing" capacity. As with any college student, class attendance was generally excellent although a number of the students tended to "cut" excessive numbers of classes. It was the feeling of the staff that this tended to be somewhat less than is usually found among sighted college students.

The initial group of students to come through the program was found to have problems with study habits, scheduling of time, and they were not reasonably familiar with some of the equipment at their disposal. These students received individual help as situations arose. In the course of the first year's follow-up meeting held in the fall, the students suggested a more organized approach to these general problems. It is interesting to note here that Tautfist (1961) has noted evaluations of orientation programs have generally been based on students' attitudes and opinions, statements of freshmen problems, and programs reviewed by staff and faculty. One outcome of such exchange was that in the following two years of the program, a specific course was provided twice weekly to deal with study and the techniques required

in recording, note-taking, and writing. The Bureau of Exceptional Children provides funds each semester to each blind student to be utilized for reader services. Students may use readers for recording material, face to face reading, or as laboratory assistants. There was considerable emphasis placed on the most effective use of readers, pointing out the criteria of selection of readers with good voices, establishment of definite schedules, utilizing fair hourly rates for each subject. Sources of readers were suggested including the student employment service, certain societies, church groups, B'nai B'rith, and their own classroom or dormitory. Each student was instructed in maintenance of records of each reader's time and in preparation of the appropriate forms for reimbursement.

Werner (1959) has stated that more academic emphasis is needed in orientation programs: we attempted to do this by means of the study course. Exercises in listening and writing themes were developed to help the students. Instruction on library usage and resource material was scheduled, and awareness of current events was stressed as essential to a good student. The study course was also concerned with the use of tape recorders, stenomasks, and audiograph machines with which the students were able to experiment and practice. A majority of the students using recording equipment preferred utilizing the stenomask of the type produced by Talk, Inc. The new Norelco portable tape recorder with a remote control microphone and cartridge tapes was also well received and found to be an excellent tool, particularly for classroom work.

The functions of the academic administration were reviewed with the study group by the Dean of Men or Dean of Women, Registrar or guidance counselor. A number of questions relating to college administration were thus resolved. The question of extra time for tests was discussed with the conclusion that the blind student may be given extra time on certain types of tests, particularly those composed of multiple choice and matching columns. Short answer oral tests administered by the teacher seemed to be the most disconcerting by student standards. Tests in mathematics were exceptionally difficult for the blind student, as were note-taking and general understanding of classwork in this subject.

In the final year of the project an informal comparison was made between the number of hours students in the program study and the number of hours college students who are not visually handicapped study. The mean number of hours reportedly put into studies by non-handicapped students was 17.3 hours. The mean number of hours put into studies by students who have completed this program and are presently enrolled in college was found to be 27.0 hours. No controls were involved in the groups making up these samples, although it is thought interesting that blind students find it necessary to devote almost twice as much time to studies.

Major emphasis of the program was on "being a part of the college community" and, although there were particular courses in study, grooming, and mobility, the students were encouraged to participate in the extra-curricular activities sponsored by the Syracuse University summer

school. Smith, Perkins, & Zugler (1957) found that the most favorably received activities were not academic or intellectual but social events and meetings with resident hall counselors; this seems to have been true of our group also. Several of the young men took advantage of the gymnasium, and one was readily accepted as an excellent wrestler and became a real member of the "in" group of athletes on campus. Some of the students arranged to go swimming with their sighted friends, both at the school pool and at nearby lakes. Three of the students became involved in the summer choir and the band, while others attended square dances and film festivals. Bus trips to Corning Glass Company in Corning, New York and Niagara Falls were also of interest to some of the group. Several outings to bowling alleys proved successful, and some of the students bowled for the first time. A favorite form of entertainment was group music and singing.

In order to complete the program of total orientation, a variety of group and individual remedial services were provided following an evaluation of the students in activities of daily living by the occupational therapy staff of the Department of Rehabilitation Medicine and the Program's peripatologist, supplemented by observation of the counselors. Specific problems were also raised individually by the students themselves. On the basis of these evaluations, individualized programs were initiated in grooming, peripatology, and social graces.

Because of wide variation in visual acuity, background, former training, and onset of blindness in each case, the mobility and orientation aspects of the Program were unique. Several students had had no previous cane travel, as in the case of one girl who suffered bilateral retinal detachment immediately prior to the summer program. Other students had been exposed to mobility training as part of their schooling at Batavia School for the Blind. Other students had previously been provided with some exposure to travel either at home or at an evaluation center. As a part of the summer program, each of the 47 students was evaluated with respect to his travel ability under various conditions. This screening revealed the need for further training in some instances including the finding of the partially-sighted students who appeared independent during the day but could not travel at night. Once the needs of the students were determined, a program of mobility training was initiated.

Individual instruction was given in techniques for use of the Hoover cane and remedial work in this area was provided where indicated. Because of the large number of totally blind students in the third year Program, group mobility training sessions were provided. This represented a new approach to mobility training. Classically, mobility instruction has not been provided to more than two clients simultaneously. However, the larger group worked out successfully when used to reinforce the principles covered in individual lessons. Many of the students had poorly developed sense of body image, balance, and were in less than desirable physical condition in terms of conditioning, strength, and posture. Often, the group sessions would center around activities such as running (which four of the students had never before attempted), skipping, jumping, and exercises geared to provide the sensation of the

body moving and changing posture in space. In a number of instances, these exercises improved mobility skills, balance, and posture, and appeared to influence the grace and poise of normal movement.

The more conventional aspects of mobility training focused on orientation to the college campus and the development of skills necessitated by winding paths, quadrangles, bicycles, crowds of students, areas under construction and multi-leveled classrooms. Syracuse University is typical of most college campuses in that it was clearly not designed with the blind student in mind. It is difficult to travel on the campus because of intersecting paths and criss-crossing sidewalks running between buildings which are scattered almost randomly about a large area. However, because it is difficult and typical, it provided an excellent training ground for blind students who were taught to listen to clues, trail shore-lines, count doorways, locate landmarks, and not to hesitate in asking meaningful directions of other students.

Many of the partially sighted students accepted the use of a cane while in the Program. They came to recognize the role a cane can play in detecting obstacles while they utilized their residual vision for additional information to aid orientation. The inconvenience of a cane, it was found, was more than offset by the time saved in travel and the information supplied by their more considerate fellow students.

At the conclusion of the Program those well-motivated students who had never used a cane well before were traveling independently to and from classes, to the dorms and on neighboring streets and business areas. Students whose previous experience included mobility training, gained polish and more sophisticated travel ability due to the instruction. All but two students were considered to be competent to travel on any campus assuming the provision of some orientation. The remaining two students were not considered competent in any area to commence a four-year college program. One of these students did enter college and failed, while the other was enrolled in a special program at the Rehabilitation Center before entering college on a part-time basis in February, 1967.

Each student was seen by an occupational therapist to determine activities of daily living skills. As college students, some away from home for the first time, the blind students were frequently faced with daily problems they had not encountered before nor had they solved prior to the Program. Significant deficiencies in eating skills were frequent particularly among the totally blind graduates of residential schools for the blind. Some students did not recognize proper silverware arrangement at place settings, were unable to cut meat, preferred not to try to eat a salad and generally used their fingers as guides and pushers. While in the Program they were individually taught proper dining techniques and there was improvement to a socially acceptable standard in most cases. Others, however, were in need of further instruction and a great deal of practice with honest feedback.

One of the most essential areas for this group of collegians was that of communication. Typing ability is helpful for the sighted college student, but is an absolute necessity for a non-sighted student. This became increasingly apparent to the students and many received introductory instruction in typing and were urged to learn typing before college entry the following Fall. Writing, an important communication skill, required careful review. Many students had sufficient sight to read and write print. Others required instruction to make their signatures with various aids. In one instance a student was found to possess adequate visual acuity for reading and writing, but lacked any training in this area as he had been educated in a school for the blind and had been taught only Braille. In other words, the student could "see" the print but couldn't "read" it as he did not recognize the letter characters. By the end of the summer, the student was reading and writing script and took college notes in this fashion. It was noted too that in the main the students were poor spellers.

Some students were taught to make beds, perform simple sewing and prepare simple meals or snacks. Grooming skills including hair care, makeup, shaving and nail care were reviewed as were purchases and care and style selection of clothing.

In general, it appeared that students with some sight attending regular schools were more independent and mature in terms of caring for their own needs than were the students coming from residential schools or those from other over-protective environments. A number of test instruments of the interest-and-problem-identification type were administered to all students. These were administered to the students during each of the three summer programs and again during an evaluation-workshop meeting held with the students during each subsequent December. These latter meetings were held in New York City during the students' Christmas vacation.

The test instruments included: The Mooney Problem Check List (form C), the Wrenn Study Habits Inventory, and the Strong Vocational Interest Test (both male and female forms were appropriately used). These tests were administered during each summer session.

Because there was available to the staff of the program an ample supply of information about intellectual ability and high school achievement for each of the member students, the kinds of information sought for the program's purposes was limited to:

1) Data related to personal problems and attitudes toward self.
2) Data related to specific study habits and possible study difficulties.
3) Data related to vocational and education orientation.

During each of three summer sessions of the Program, each group of students was exposed to the same test at the same time in a group test situation. Those students who were able to do so read their own tests. For those students who did not have usable vision, which were most of

the students in each year of the program, the tests were read and recorded by the counseling staff and persons who volunteered to help with administration of the tests. Each year an effort was made to make maximum use of the results with a minimum of time devoted to actual test administration. It was found that the actual time devoted to test administration for each student was about three hours over a period of two successive days.

The Mooney Problem Check List and Wrenn Study Habits Inventory were administered to the students during the follow-up meeting. The Strong Vocational Interest Test was not used for follow-up testing. Although a discussion of the results of the testing are contained in a later section of this paper, it should be noted that the results of individual tests were used for counseling purposes with the students during the summer sessions.

A number of factors emerged from analysis of the Strong Vocational Interest Test results. The pattern of interests indicated for most of the students was relatively "flat". That is, most of the interest profiles tended to cluster near the mid-range of the profiles. This is very much like the pattern of responses noted by Shaw in a study made of the Strong Vocational Interest Test scores of some three-hundred secondary school students in grades ten, eleven, and twelve. While blind students might be expected to manifest a relatively different pattern of interests when compared with sighted students of the same approximate age, their interests seem to be very much like the interests of other high school students. Comparison between the Interest Maturity Scale scores from the Strong Vocational Interest Test revealed that a great percentage of the blind students had higher scores on the Interest Maturity Scale than was true of the sighted students in the larger group. No significance can be attached to this comparison because of the relative sizes of the two groups and because no attempt was made to control for matching or other contributing factors in the two groups.

Evaluation of the vocational preferences of the blind students suggested considerable realism in the kinds of aspirations they have for various occupations and vocations. Most of the profiles seem to indicate little interest in those occupations in which visual handicaps would preclude entering the field. For example, few students revealed an interest in medicine, pure science occupations, or manager-ownership type positions. They did, on the other hand, tend to indicate high interest in all areas of sales work, social service occupations (as well as social service administrative type positions), and lawyer-author positions.

An effort was made to subject the results of the testing used in the project to statistical analysis. However, the Mooney Problem Check List, the Wrenn Study Habits Inventory, and the Strong Vocational Interest Test do not lend readily to statistical analysis. Inconsistent availability of students for retesting at the follow-up workshop held each December after the three summer sessions added to difficulties

in analysis. A number of the students did not take part in the December workshops and were thus not available for retesting.

The responses of the students to the Mooney Problem Check List administered during the summer sessions revealed a greater concern with problems of personal-home-family orientation. Among the students who completed the Mooney Problem Check List in December after having completed a semester of college there seemed to be greater concern with personal problems related to education, peer relationships, social and personal-psychological problems. These trends are not unusual and reflect the pattern found among most college students after an initial exposure to college life. The test data did not define the impact of the summer program upon the blind students. Initial staff evaluations suggested that the students were somewhat immature personally and socially, and staff evaluations at the close of the summer sessions suggested some change due to the program. The test data obtained neither supported nor contradicted this estimate.

The Wrenn Study Habits Inventory did not confirm any over-all improvement in study skills as a result of participation in the project for the students involved. This test was used, however, in counseling with individual students concerning their study skills.

Positive responses were obtained to many of the activities of the Pre-College Orientation Program for Blind High School Graduates. Student perception of the central purpose and academic emphasis were consistent with the objectives of the demonstration program, and the data clearly implies that this orientation program was well received. This finding suggests the possibility that a well-organized pre-college program would be accepted by students, parents, universities, and vocational rehabilitation agencies.

The type of organizational plan appeared to influence student response. Small group meetings and individual sessions were consistently responded to more favorably than large group meetings.

The positive response of students to the orientation program would seem to indicate that the needs of students were met. It may be that the orientation program contributed to the elimination or diminution of pre-college anxieties by providing information at a critical time. From the University's point of view, the available evidence suggests that pre-college orientation may realistically be viewed as most useful, and that this type of organization of activities is important in improving and maintaining a favorable response to a college program. However, Liftan's 1960 comment pointing out the need for research on "comparative effectiveness of differing orientation techniques to student growth in security or self-knowledge" is still relevant. Programs utilizing small groups may be the ideal pre-college orientation for all handicapped students. Additional individual and family counseling, however, may be required to meet problems demanding more careful and detailed attention.

Contrary to Ivey's hypothesis that activities most closely identified with intellectual content were the most poorly received, we found it is possible to change student perception of the purposes of the orientation program from "social" to academic and obtain a highly favorable response from the students, which would support Zwicky's findings. However, the actual contribution of such an orientation program to academic life and the transition from high school to college remains difficult to define. The students believe that they have benefited in a variety of ways, and with much individual coloration and recommended continuation and expansion of present programs.

Conclusions

Experience with 47 legally blind pre-college freshmen over a period of three years has demonstrated the following:

(1) Students in the Program evidenced essentially the same pattern of interests as their sighted peers but rated higher on maturity scales. In general, their problems were similar to their sighted classmates but in addition, there were problems relating to their poorer vision. Most students evidenced less acceptable table manners, particularly those with little or no sight, which may be related to their inability to imitate others as well as the apparent lack of training or sufficient supervised practice afforded in residential schools.

(2) Good typing ability was a necessity for the blind student. Some students were handicapped by their lack of proficiency in this area and were encouraged to enroll in classes before beginning college. It would be well for all blind students to have typing while still in high school, so that they would be fully familiar with the technique as the needs increase.

(3) Whether due to the conjunctions used in Braille or to the lack of exposure to a great deal of printed reading material, the visually handicapped were exceptionally weak spellers and were in need of much remedial help in this area. Also, probably related to slower and more tedious reading techniques, the blind stuent must devote almost twice as much time to studies as does his non-handicapped peer.

(4) Mobility is definitely a prerequisite if a student is to be successful on a college campus. With only a few minutes between classes, the visually handicapped student must be equipped to move swiftly and safely through congested corridors and perhaps busy streets. Group sessions were found to be beneficial in some aspects of mobility training and physical fitness.

(5) Interested, mature undergraduates are capable of working well with the visually handicapped freshmen if knowledgable supervision is provided. As more and more colleges embark upon freshmen orientation weeks, this system may be found very helpful.

(6) Provision of prior exposure to college in a program similar to the Pre-College Orientation Program appears to improve chances of successful college participation for the blind student. During such a program the student experiences a degree of independence, a burden of responsibility and a preview of work assignments to which he must orient himself, to and within which he must function. Professional assistance and the support offered by his peers help to diminish the anxiety and traumatic reactions which could otherwise be severe enough to cause academic failure or significant emotional problems.

(7) The percentage of success among the students participating in the Program was remarkable. Of the 47 students completing the Pre-College Program, only one dropped out of school after a semester and two others after one year. One other student left school to marry but is returning next semester. Thus, over 91% were successful in remaining in college.

(8) The pre-college orientation program favorably affects both the blind student and the sighted community. Similar programs in this and other communities for students with blindness and other disabilities would appear to merit trial.

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